

Reference

Tektronix

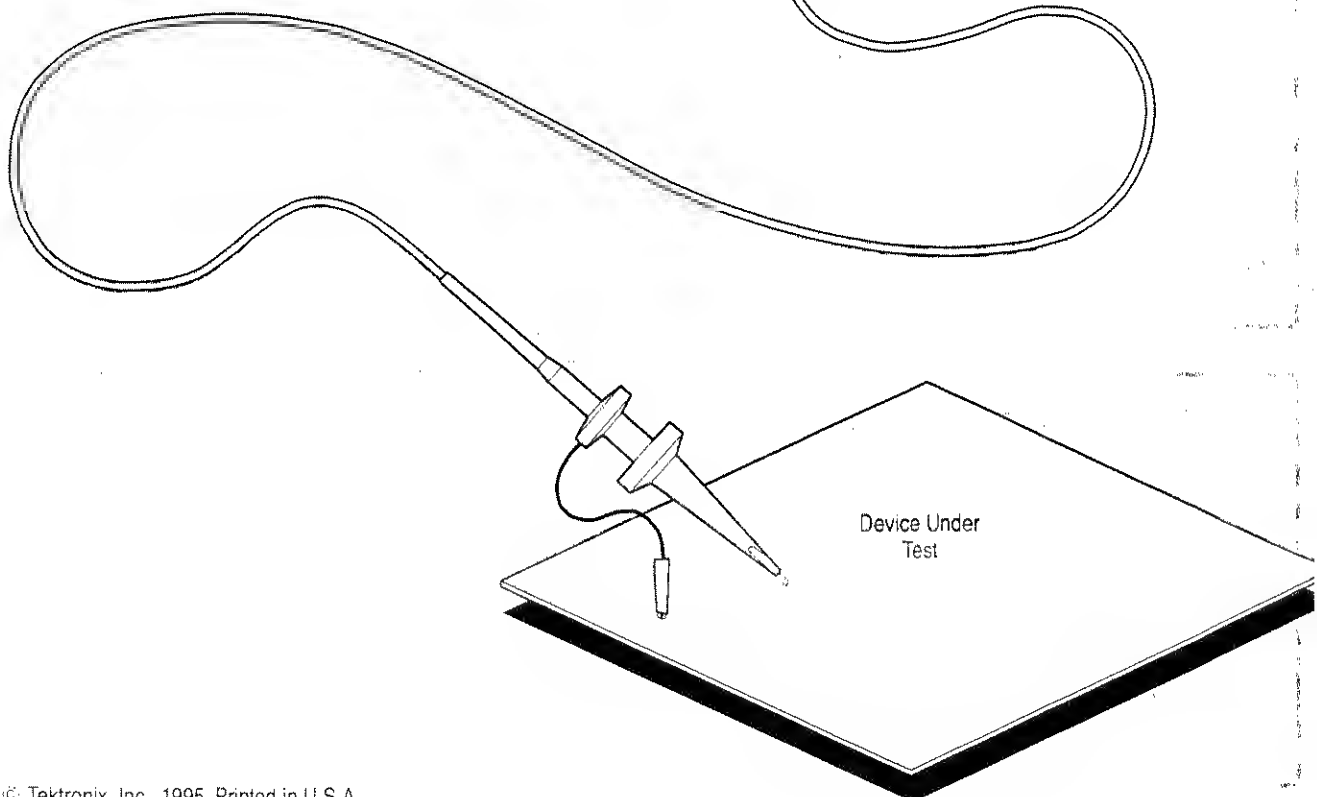
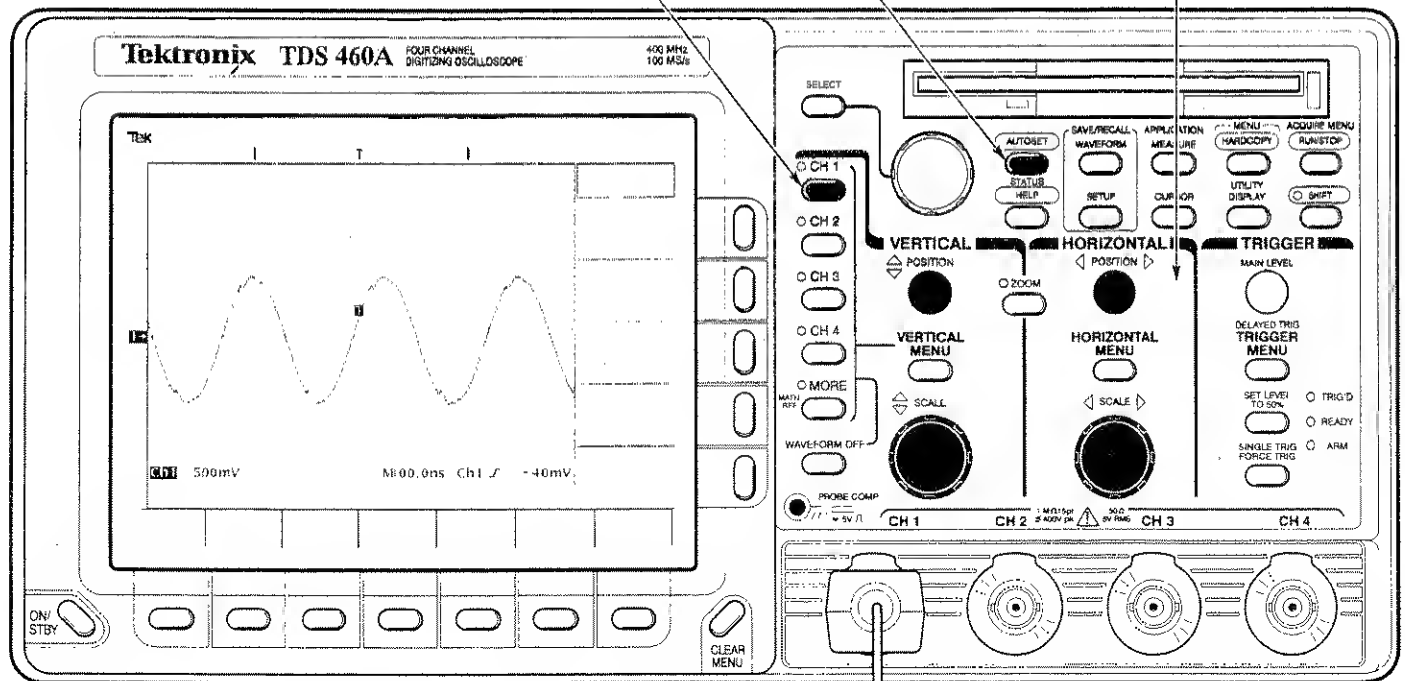


TDS 410A, TDS 420A & TDS 460A
Digitizing Oscilloscopes

070-9220-00

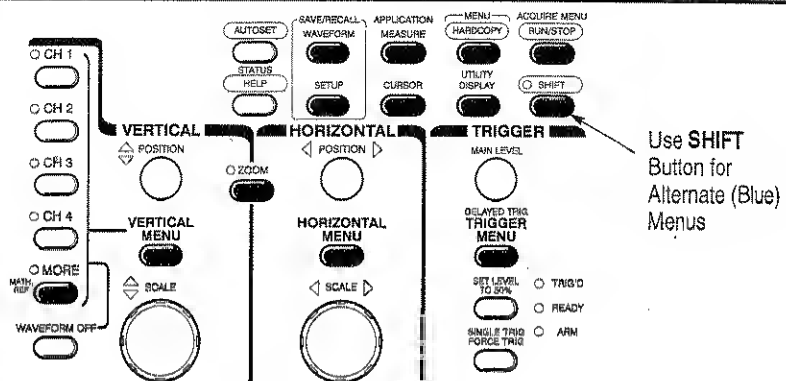
To Display a Waveform:

- 1 Attach a probe to CH 1 and hook it up to your signal.
- 2 Press CH 1 button.
- 3 Press AUTOSET.
- 4 Adjust VERTICAL and HORIZONTAL POSITION and SCALE as desired.

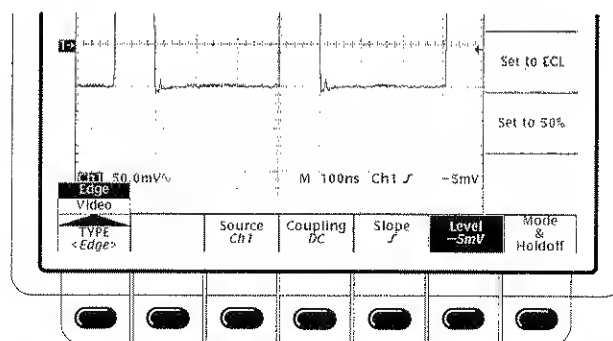


To Set Up Using a Menu:

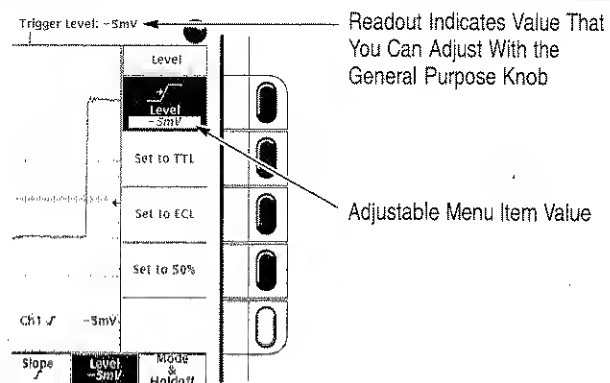
- 1 Press any of the front panel menu buttons.



- 2 Select an item from the main (bottom) menu.



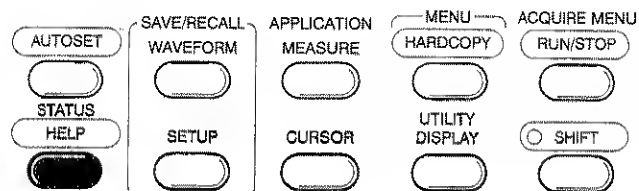
- 3 Select any displayed item from the side menu.



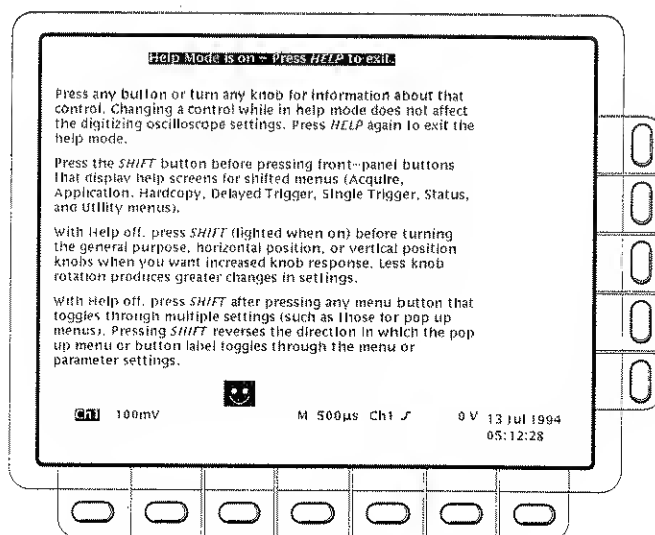
- 4 Adjust menu item values using the general purpose knob.



To Display Help On Screen:

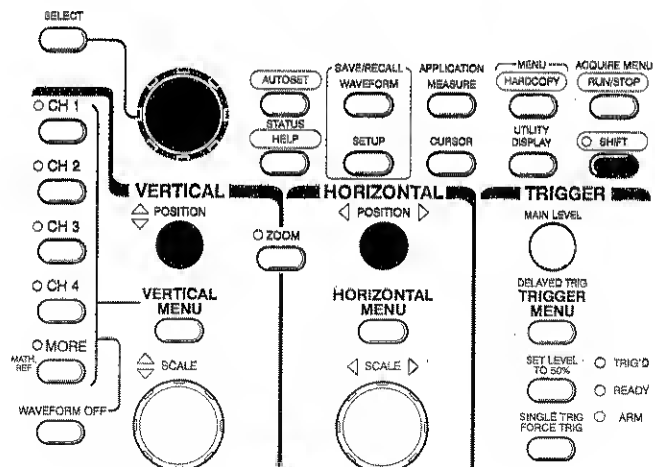


- 1 Press the **HELP** button.



- 2 Now turn any knob or press any button and read a description of it on the display. Press the **HELP** button again to exit help.

To Speed Up Knob Adjustments:



Press the **SHIFT** button to change the rate of the **VERTICAL** and **HORIZONTAL POSITION** knobs and the general purpose knob.

To Select a Trigger:

TRIGGER

MAIN LEVEL

DELAYED TRIG
TRIGGER MENU

SET LEVEL TO 50% ☐ TRIG'D

☐ READY

SINGLE TRIG ☐ ARM

FORCE TRIG

1 Press the **TRIGGER MENU** button.

This Symbol Indicates Pop-Up Menu

2 Select trigger type or parameter from main menu.

TRIGGER

MAIN LEVEL

DELAYED TRIG
TRIGGER MENU

SET LEVEL TO 50% ☐ TRIG'D

☐ READY

SINGLE TRIG ☐ ARM

FORCE TRIG

3 Set **TRIGGER LEVEL** (Edge Trigger Only).

TYPE <Edge>		TYPE <Video>	
Coupling	Slope	Video Class	Sync Polarity
DC DC	Positive	NTSC	Negative
AC AC	Negative	PAL	Positive
HF Reject		SECAM	
LF Reject		Custom	
Noise Rej (DC Low Sensitivity)			

"T" Shows Trigger Position

Press to Display Pop-Ups

Press Again to Make Selection

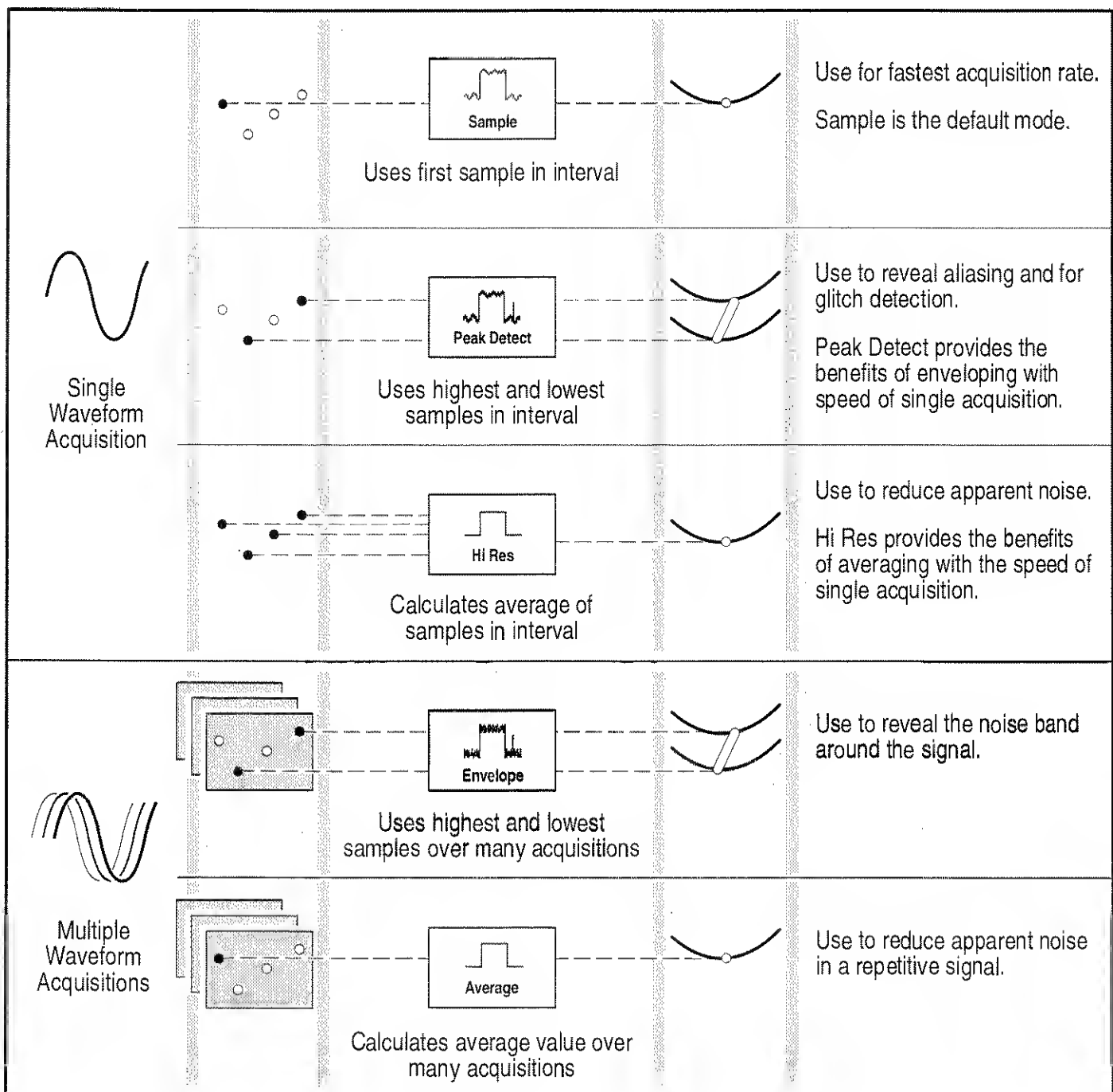
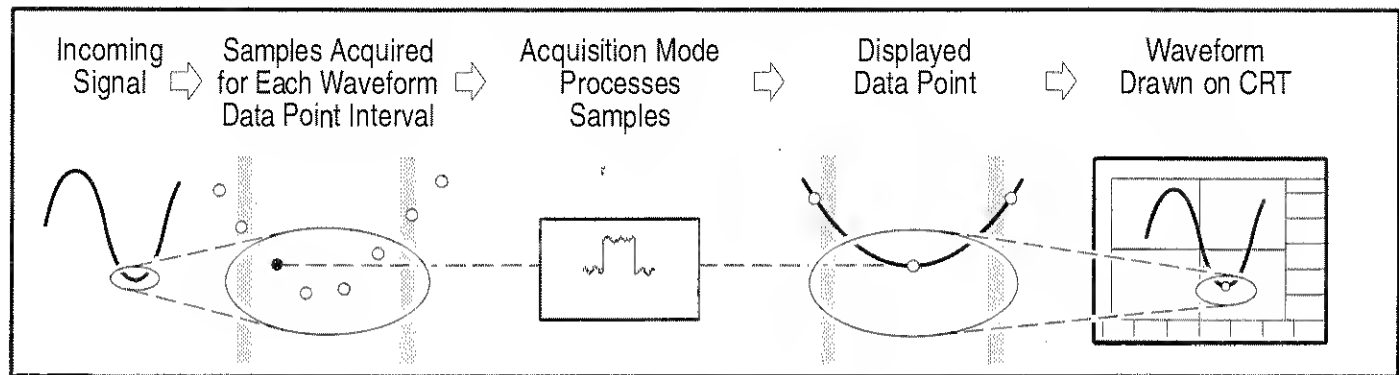
A Pop-Up Selection Changes the Other Main Menu Items

Title of Side Menu

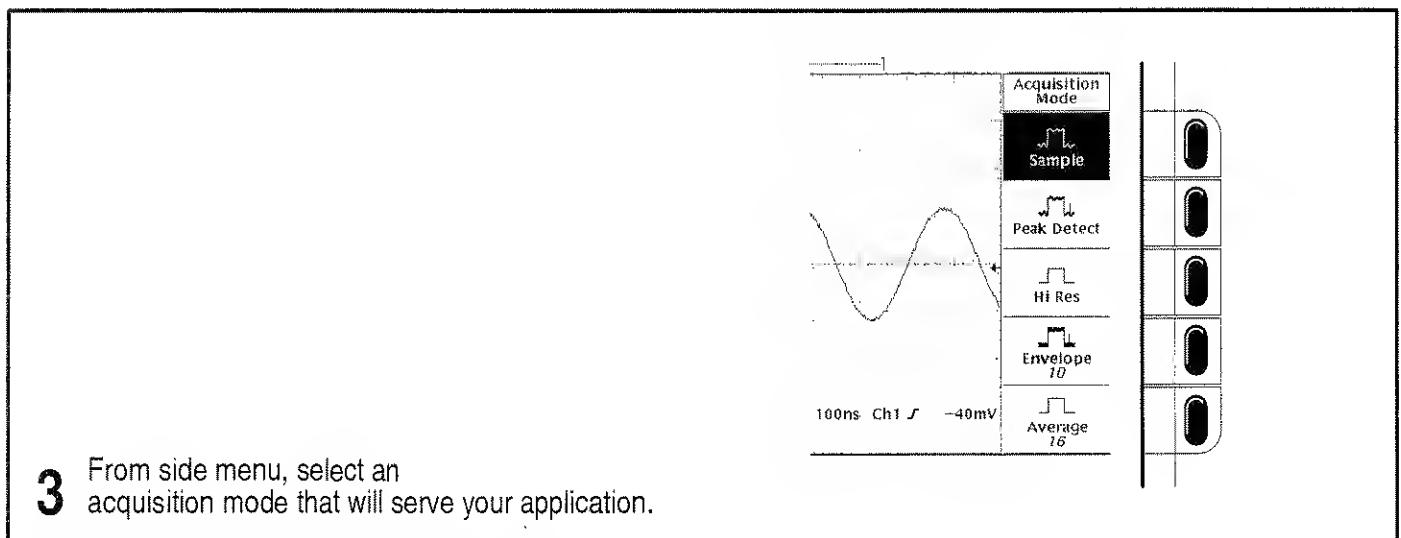
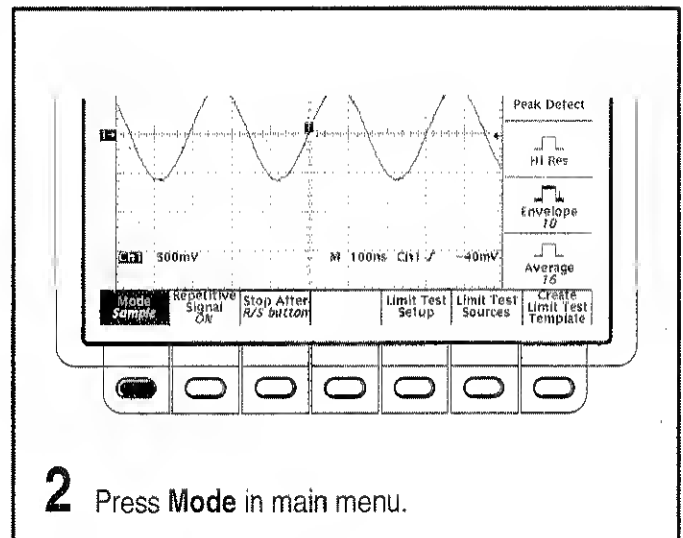
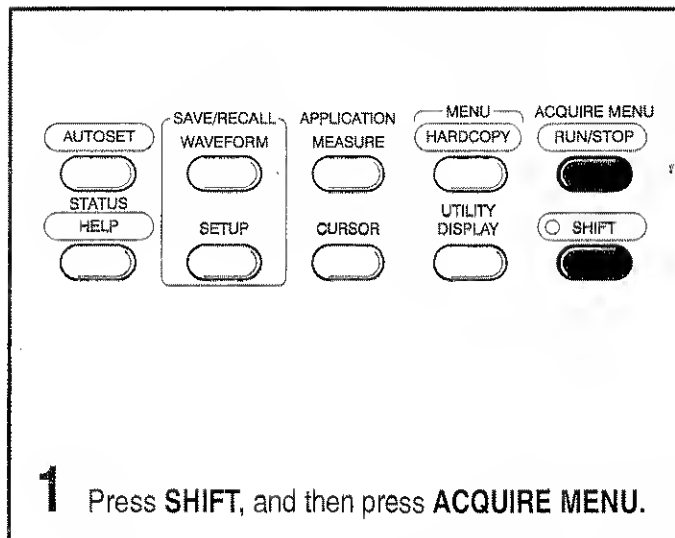
Arrow Shows Trigger Level

Removes Menus From Screen

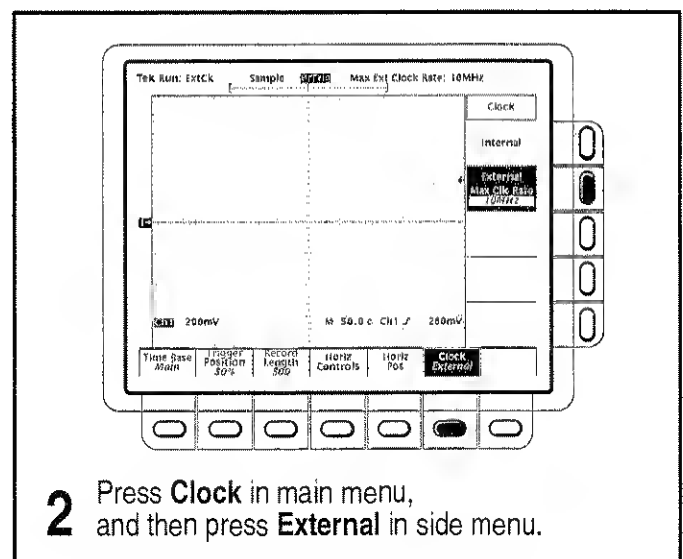
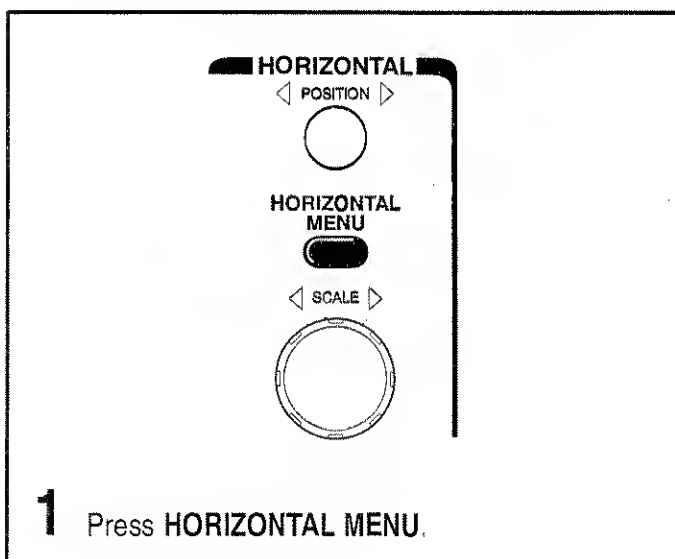
How the Acquisition Modes Work:



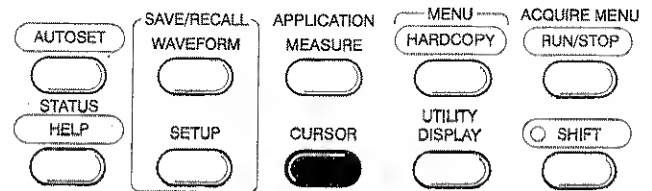
To Choose an Acquisition Mode:



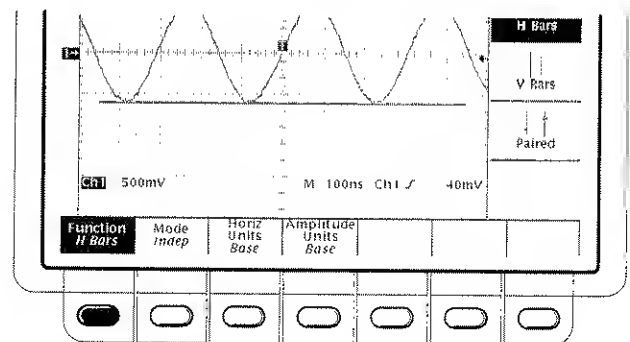
To Use External Clock:



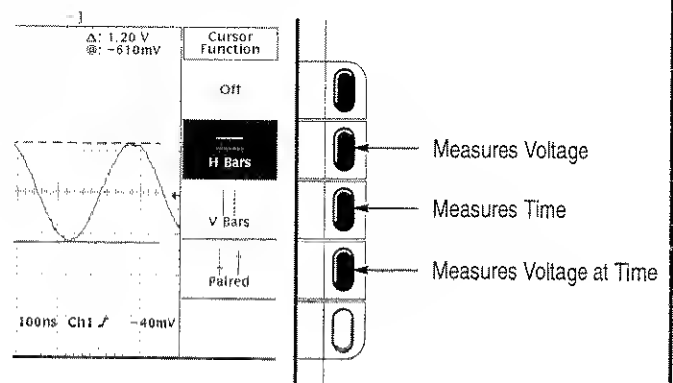
To Take Measurements With Cursors:



1 Press **CURSOR** button.



2 Press **Function** in the main menu.

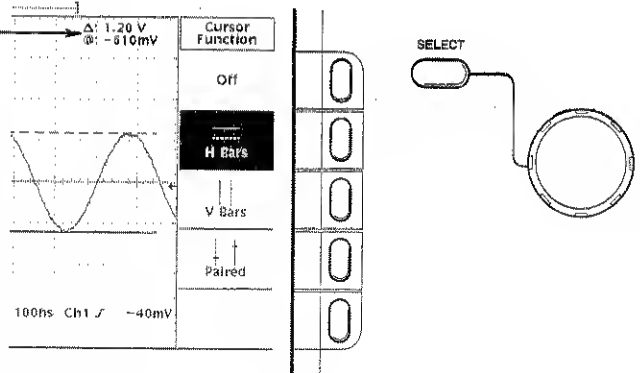


3 Select from the side menu.

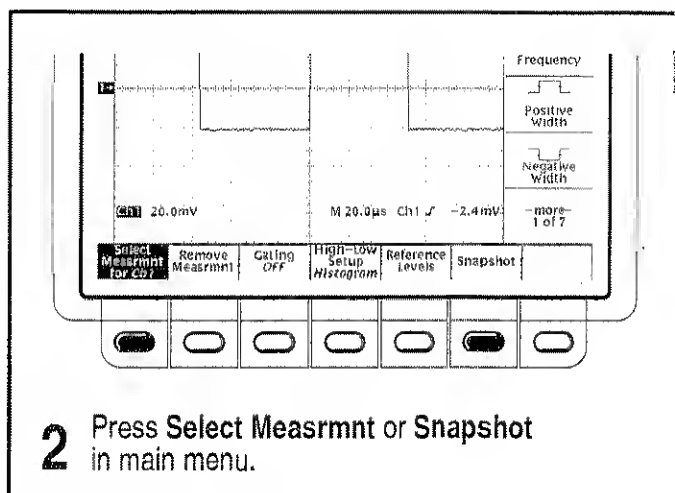
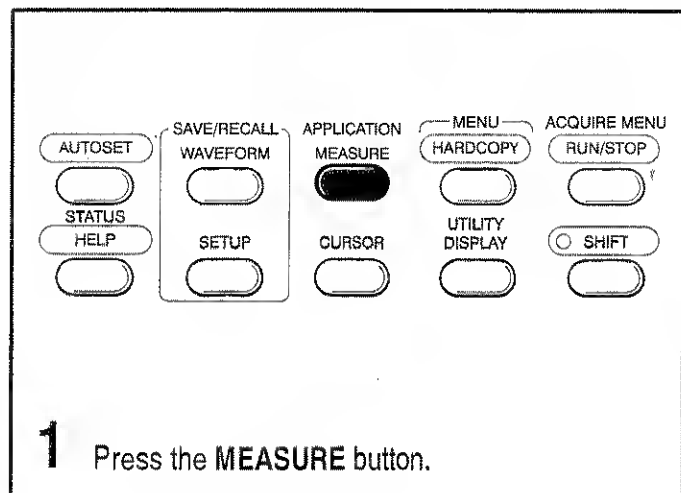
Δ Difference Between Cursors in Volts (Horizontal Bars) or Time (Vertical Bars)

Θ Position of Active Cursor Relative to Ground (Horizontal Bars) or Trigger (Vertical Bars)

4 Move cursor with the general purpose knob.
Press **SELECT** to switch between cursors.
Press **SHIFT** to speed up/slow down cursor movement.



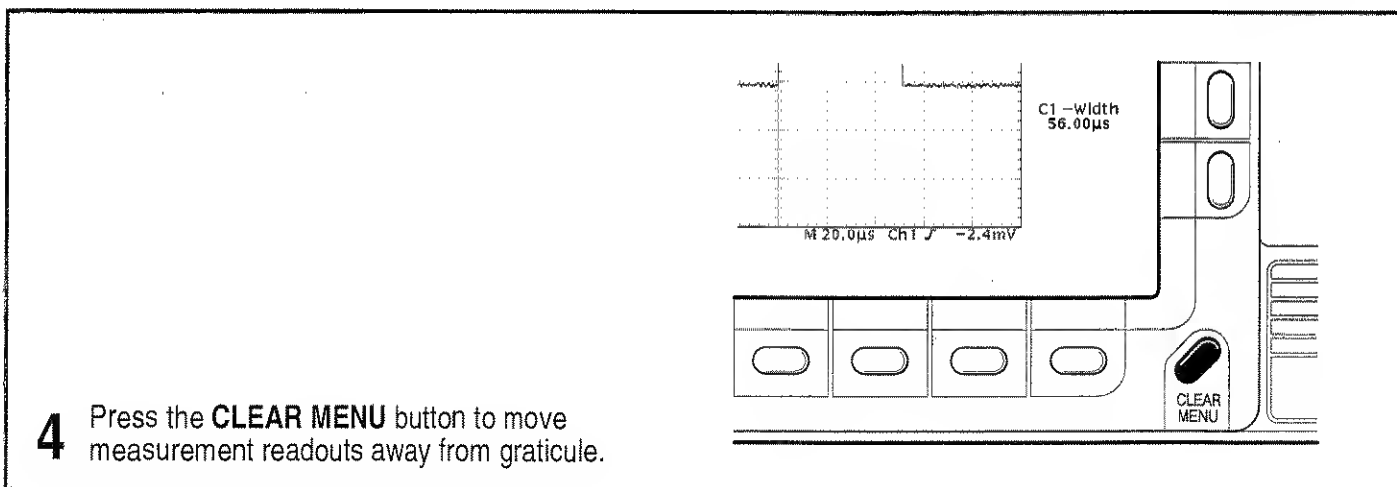
To Take Measurements Automatically:



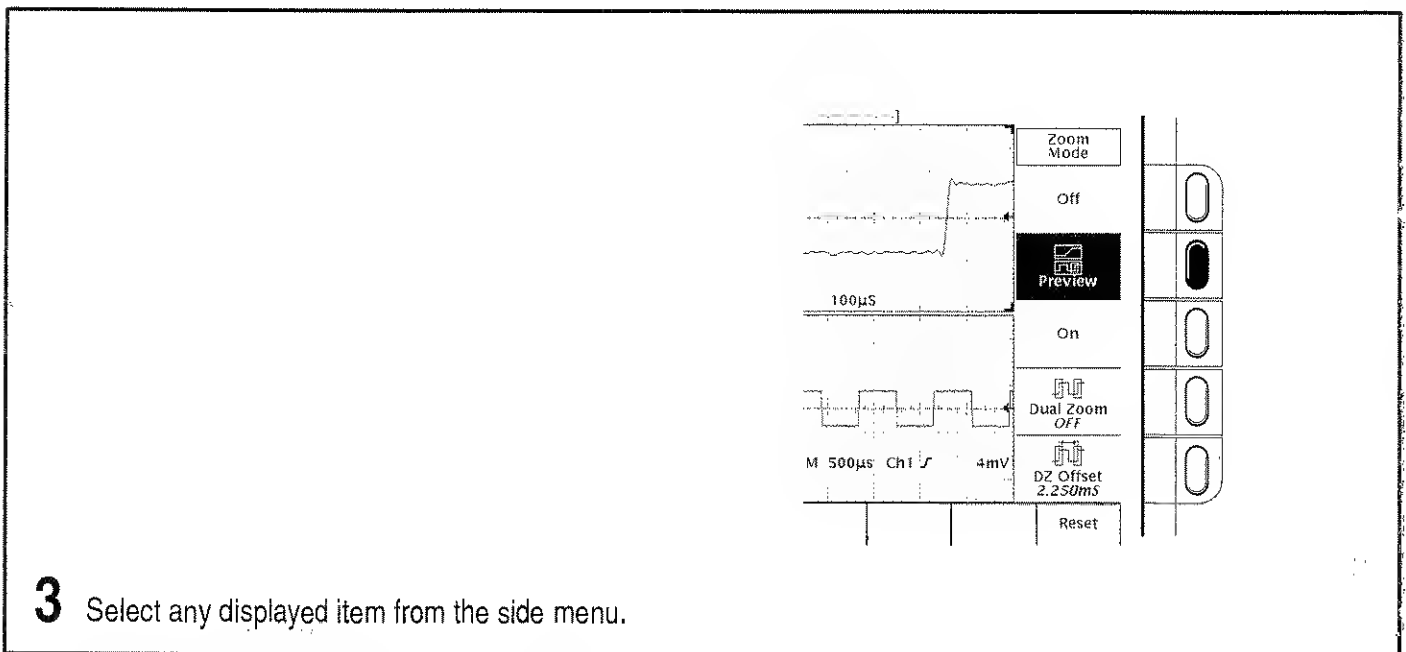
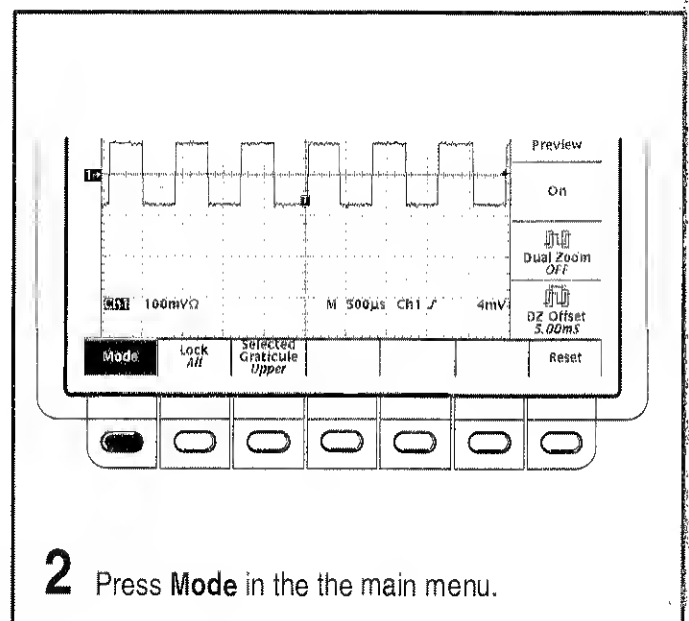
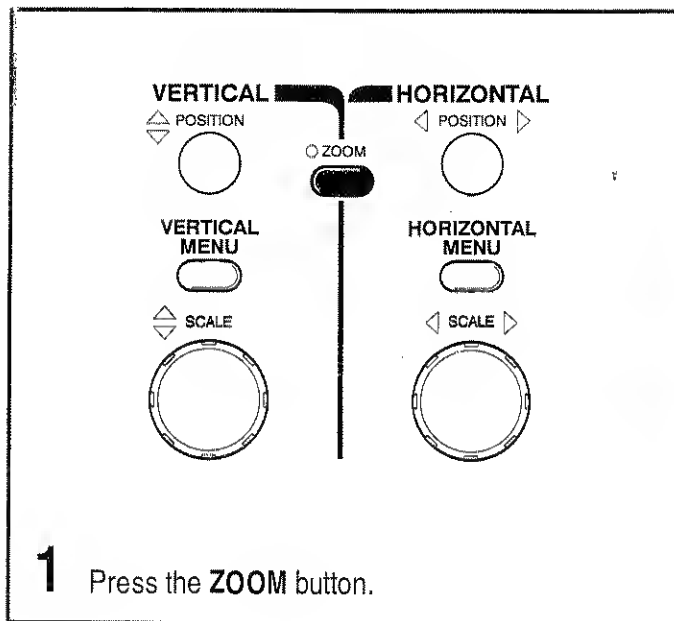
3 Select up to four measurements.

Automated Measurement Selections

Select Measurement						
Period	Rise Time	Delay	High	Pk-Pk	Mean	Area
Frequency	Fall Time	Phase	Low	Amplitude	Cycle Mean	Cycle Area
Positive Width	Positive Duty Cycle	Burst Width	Max	Positive Overshoot	RMS	—more— 7 of 7
Negative Width	Negative Duty Cycle		Min	Negative Overshoot	Cycle RMS	To 1 of 7
—more— 1 of 7	—more— 2 of 7	—more— 3 of 7	—more— 4 of 7	—more— 5 of 7	—more— 6 of 7	



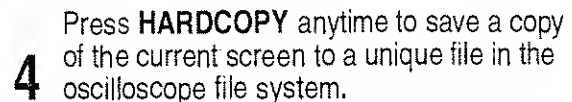
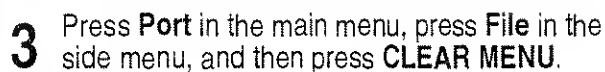
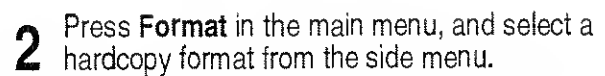
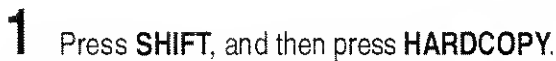
To Zoom a Waveform:



To Perform Other Zoom Operations:

- Turn the Vertical and Horizontal **SCALE** and **POSITION** knobs to adjust the scale and position factors of the acquisition or the zoomed waveforms.
- Press **Lock**, and then use the menu buttons to choose which waveform group to zoom horizontally.
- Press **Selected Graticule**, and use the menu buttons to direct the scale and position knobs to the upper (zoomed waveforms) or lower (acquisition waveforms) graticule in **Dual Zoom** or **Zoom Preview** modes.
- Press **Reset**, and press the **Reset All Factors** or **Reset Live Factors** menu buttons to reset the zoom factors.

41 40 0 *



- Press **SAVE/RECALL WAVEFORM**, and use the menu buttons to save a waveform to a file or recall it from a file.
- Press **SAVE/RECALL SETUP**, and use the menu buttons to save a setup to a file or recall it from a file.
- Press **File Utilities** in the Save/Recall Waveform, Save/Recall Setup, or Hardcopy menus to access utilities that create directories, copy files, and do other operations in the oscilloscope file system.